**DERWENT-ACC-NO:** 1994-180907

**DERWENT-WEEK:** 199422



**TITLE:** Ionising radiation registration device - has scintillator to convert radiation into light flashes and uses photodetector, in form of layer of solid soln. to convert light flashes

**INVENTOR:** KOMASHCHENKO, V N; KRULIKOVSKAYA, E B ; MAZIN, M A

**PATENT-ASSIGNEE:** KOMASHCHENKO V N[KOMAI]

**PRIORITY-DATA:** 1982SU-3442866 (May 26, 1982)

**PATENT-FAMILY:**

| PUB-NO | PUB-DATE | LANGUAGE | PAGES | MAIN-IPC |
|---|---|---|---|---|
| SU 1060035 A1 | February 7, 1993 | N/A | 006 | G01T 001/20 |

**APPLICATION-DATA:**

| PUB-NO | APPL-DESCRIPTOR | APPL-NO | APPL-DATE |
|---|---|---|---|
| SU 1060035A1 | N/A | 1982SU-3442866 | May 26, 1982 |

**INT-CL (IPC):** G01T001/20

**ABSTRACTED-PUB-NO:** SU 1060035A

**BASIC-ABSTRACT:**

The device is made of a semiconducting scintillator with a photo-detector applied to it. The photodetector is made in the form of a layer of solid soln. forming a heterogeneous pn junction with the material of the scintillator.

Ionising radiation passes through an inlet opening (10) onto the crystal of a scintillator (1), exciting flashes of light radiation,

which spread through the space of the scintillator (1) to a photodetector (3) where the light is absorbed in a layer (4) of a solid soln. of the scintillator (1) generate electron hole pairs, disrupting equilibrium state of current of charge carriers in the pn layer (4) between a low ohm layer (2) and the photodetector (3). The resulting voltage drop on a resistor (8) is registered by a measuring instrument (9). After ending of action of a flow of photons, generation of charge carriers ceases and dynamic equilibrium is restored.

USE/ADVANTAGE - Used for measurement of intensity of continuous and pulse flows of radiation. Better action speed and sensitivity.

**CHOSEN-DRAWING:** Dwg.1/1

**TITLE-TERMS:** IONISE RADIATE REGISTER DEVICE SCINTILLATION CONVERT RADIATE LIGHT FLASH PHOTODETECTOR FORM LAYER SOLID SOLUTION CONVERT LIGHT FLASH

**DERWENT-CLASS:** K08 S03

**CPI-CODES:** K08-A;

**EPI-CODES:** S03-G02B1;

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**CPI Secondary Accession Numbers:** C1994-082217

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